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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,828	11/29/2001	Jin-gyo Seo	1293.1273	9729

21171 7590 05/21/2003

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EXAMINER	
LE, KIMLIEN T	
ART UNIT	PAPER NUMBER
2653	8

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No.	Applicant(s)
	09/995,828	SEO, JIN-GYO
	Examiner	**Art Unit**
	Kimlien T Le	2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 March 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 18-26* is/are pending in the application.

4a) Of the above claim(s) *13-17* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12 and 18-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Applicant's election without traverse of Group I, claims 1-12 and 18-26 in Paper No. 7 is acknowledged.

2. Claims 13-17 belong to Group II. Therefore, 13-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species.

Claim Objections

3. Claims 6-10 and 12 are objected to because of the following informalities: In claim 6-10 and 12, line 1, "wherein" should be added. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. Claims 5 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, line 2, "the reference power level" lacks proper antecedent basis. Also, in claim 9, line 2, "the reference power level" lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagara et al. (U.S. Patent 6,407,976).

Regarding claim 1, see Figs. 1-3 and 7 of Nagara et al which show an adaptive recording method used with an optical recording medium, according to which a mark is formed using a multiple pulse train comprising a first pulse, a multi-pulse having a peak power level, and a last pulse, and power levels of the first and last pulses are controlled with respect to the peak power level of the multi-pulse depending on a correlation between a mark and a space between successive marks, the method comprising: setting the power level of the first pulse depending on the correlation between the mark and the space; setting the power level of the last pulse depending on the correlation between the mark and the space; and driving a recording unit by the multiple pulse train having the set power levels of the first and last pulses (column 1, lines 45-60; column 3, line30- column 4, line 53).

Regarding claim 2, see Figs. 1-3 and 7 of Nagara et al which show the method of claim 1, wherein the power level of the last pulse is set independent of the power level of the first pulse (column 3, line30- column 4, line 53).

Regarding claim 3, see Figs. 1-3,5 and 7 of Nagara et al which show the method of claim 1, further comprising changing the power level of the multi-pulse depending on the energy of a non-return-to-zero inverted (NRZI) signal (column 9, lines 55-65).

Regarding claim 4, see Figs. 1-3 and 7 of Nagara et al which show the method of claim 1, wherein the recording unit is a laser diode (column 6, lines 62-68).

Regarding claim 5, see Figs. 1-3 and 7 of Nagara et al which show the method of claim 1, wherein the power level of the first pulse is set higher or lower than the reference power level (Fig. 7).

Regarding claim 6, see Figs. 1-3 and 7 of Nagara et al which show the method of claim 1, wherein the power level of the first pulse is set depending on a correlation between a current mark and a previous space (Figs. 1A-1C and 7).

Regarding claim 7, see Figs. 1-3 and 7 of Nagara et al which show the method of claim 6, wherein the power level of the first pulse is set depending on the correlation between the current mark and the previous space or the size of the current mark (Figs. 1A-1C and 7).

Regarding claim 8, see Figs. 1-3 and 7 of Nagara et al which show the method of claim 1, wherein the power level of the first pulse is set depending on the size of a current mark (Figs. 1A-1C and 7).

Regarding claim 9, see Figs. 1-3 and 7 of Nagara et al which show the method of claim 1, wherein the power level of the last pulse is set higher or lower than the reference power level (Figs. 1A-1C and 7).

Regarding claim 10, see Figs. 1-3 and 7 of Nagara et al which show the method of claim 1, wherein the power level of the last pulse is set depending on the correlation between the current mark and a next space (Figs. 1A-1C and 7).

Regarding claim 11, see Figs. 1-3 and 7 of Nagara et al which show the method of claim 9, wherein the power level of the last pulse is set depending on the correlation between the current mark and the next space or the size of the current mark (Figs. 1A-1C and 7).

Regarding claim 12, see Figs. 1-3 and 7 of Nagara et al which show the method of claim 1, wherein the power level of the last pulse is set depending on the size of the current mark (column 1, lines 45-60).

6. Claims 18-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Maeda et al. (U.S Patent 6,160,784).

Regarding claim 18, see Figs. 1-4 of Maeda et al. which show a method of controlling recording a signal on an optical disc using multiple pulse trains comprising a first multi-pulse train having a first pulse, a multi-pulse having a reference power level, and a last pulse, the method comprising: controlling the power level of the last pulse independent of the power level of the first pulse (Fig1; column 4, line 42- column 6, line 35; Abstract).

Regarding claim 19, see Figs. 1-4 of Maeda et al. which show the method according to claim 18, wherein the power levels of the first and last pulse are controlled by selecting a peak power level P_w, a power P_{wh} higher than the peak(Fig1; column 4, line 42- column 6, line 35; Abstract).

Regarding claim 20, see Figs. 1-4 of Maeda et al. which show the method according to claim 19, wherein P_w is an optimum peak power level and P_w and P_{wl}, are generated by adding or

subtracting a predetermined value to or from the optimum peak power level P_w, respectively (Fig1; column 4, line 42- column 6, line 35; Abstract).

Regarding claim 21, see Figs. 1-4 of Maeda et al. which show the method according to claim 18, wherein the multi-pulse reference power level is greater than the first pulse power level and less than the last pulse power level (Fig1; column 4, line 42- column 6, line 35; Abstract).

Regarding claim 22, see Figs. 1-4 of Maeda et al. which show the method according to claim 19, wherein the multiple pulse trains further comprises a second multi-pulse train having a first pulse, a multi-pulse having a reference power level, and a last pulse, wherein the power level of the multi-pulse of the second multipulse train is less than the first pulse power level of the second multi-pulse train and greater than the last pulse power level of the second multi-pulse train (Fig1; column 4, line 42- column 6, line 35; Abstract).

Regarding claim 23, see Figs. 1-4 of Maeda et al. which show the method according to claim 22, wherein the multiple pulse trains further comprise a third multi-pulse train having a first pulse, a multi-pulse having a reference power level, and a last pulse, wherein the power level of the multi-pulse of the third multi-pulse train is equal to the first pulse power level of the third multi-pulse train and great than the last pulse power level of the third multi-pulse train (Fig1; column 4, line 42- column 6, line 35; Abstract).

Regarding claim 24, see Figs. 1-4 of Maeda et al. which show a method of controlling recording marks on an optical disc using multiple pulse trains comprising first, second and third multi-pulse trains each having a first pulse, a multi-pulse having a reference power level, and a last pulse, the method comprising: providing a different reference power level to each multi-pulse train depending on the energy or density of a non-return-to-zero inverted (NRZI) signal

detecting correlation between a current mark and a space between successive marks (column 4, line 42- column 6, line 35).

Regarding claim 25, see Figs. 1-4 of Maeda et al. which show a method according to claim 24, wherein the power level of the first and last pulse of each of the first, second and third multi-pulse trains is higher or lower than the reference power level (column 4, line 42- column 6, line 35; Abstract).

Regarding claim 26, see Figs. 1-4 of Maeda et al. which show a method according to claim 18, wherein the power level of the multi-pulse is controlled independent of the first and last pulses (Fig1; column 4, line 42- column 6, line 35; Abstract).

Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimlien T Le whose telephone number is 703 305 3498. The examiner can normally be reached on M-F 8a.m-5p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Korzuch William can be reached on 703 305 6137. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9314 for regular communications and 703 872 9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 3900.

Kimlien Le
May 19, 2003

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